

WO 00/60088

PCT/US00/09110

SEQUENCE LISTING

<110> E. I. du Pont de Nemours and Company

<120> Plant Viral Movement Protein Genes

<130> BB1344

<140>

<141>

<150> 60/128,092

<151> 1999-04-07

<160> 56

<170> Microsoft Office 97

<210> 1

<211> 450

<212> DNA

<213> Vitis sp.

<220>

<221> unsure

<222> (445)

<400> 1

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gattttgtgg gagaagcaac cattccacta gaggcactct tcacggaagg aagcctggag 360
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<210> 2

<211> 130

<212> PRT

<213> Vitis sp.

<220>

<221> UNSURE

<222> (129)

<400> 2

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Glu Asn Thr Asp Phe Leu Cys Asn Met Asp Pro Tyr Val Val Leu Thr
      20                      25                      30

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Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser
      35                      40                      45

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Asp Pro Glu Trp Asn Glu His Phe Val Phe Thr Ile Ser Glu Gly Ile
      50                      55                      60

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Ser Glu Leu Thr Ile Lys Ile Met Asp Ser Asp Ser Gly Ser Gly Asp

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65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Leu Phe Thr Glu
85 90 95

Gly Ser Leu Glu Pro Ser Thr Gly Thr Met Leu Leu Lys Thr Lys Glu
100 105 110

Tyr Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Gln Lys Gly Lys
115 120 125

Xaa Asp
130

<210> 3
<211> 916
<212> DNA
<213> Zea mays

<400> 3

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ggcgagttgg gttgggtcta tctcgcaatc gaggcgtttt ttttctgctt cgtaagttcg 180
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aaaaaaaaa aaaaaa 916

<210> 4
<211> 129
<212> PRT
<213> Zea mays

<400> 4

Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Arg Gly Leu
1 5 10 15

Glu Asn Thr Asp Tyr Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln
20 25 30

Cys Arg Ser His Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys
35 40 45

Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Gly Ala
50 55 60

Ala Glu Leu Phe Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp
65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
85 90 95

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Gly Asn Ile Pro Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr
 100 105 110

Arg Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Pro Glu Asp Gln Gly
 115 120 125

Phe

<210> 5
 <211> 876
 <212> DNA
 <213> Zea mays

<400> 5
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 tttggcttct tttgattgtt tcagaagaag tggtattagt gagtttcaac aaaaaatagc 660
 tccatattgc tctatatccc gtattggaaa ttctaaggcc gtttgtgatt actgcttaca 720
 acaagaagtt ttgcttctag ttcccactac gctttttttt gaagttttga gtggaacatc 780
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<210> 6
 <211> 143
 <212> PRT
 <213> Zea mays

<400> 6
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Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Ile Leu Lys
 20 25 30

Cys Arg Ser Gln Glu Gln Lys Ser Ser Ile Ala Thr Gly Lys Gly Thr
 35 40 45

Thr Pro Glu Trp Asn Glu Asn Phe Ile Phe Thr Val Ser Asp Arg Thr
 50 55 60

Thr Asp Leu Val Ile Lys Leu Met Asp Ser Asp Thr Gly Thr Ala Asp
 65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
 85 90 95

Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr
 100 105 110

Cys Gly Glu Ile Lys Val Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg

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115

120

125

Gln Arg Gly Leu Pro Glu Asp Phe Gly Gly Trp Lys Gln Ser Ser
 130 135 140

<210> 7
 <211> 771
 <212> DNA
 <213> Hevea brasiliensis

<220>
 <221> unsure
 <222> (671)

<220>
 <221> unsure
 <222> (721)

<220>
 <221> unsure
 <222> (752)

<220>
 <221> unsure
 <222> (767)

<220>
 <221> unsure
 <222> (769)

<400> 7
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 ttaagtcttt tctttttcgc tttttggatt caattctggg ccaaaaatgc ctctaggaac 180
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<210> 8
 <211> 140
 <212> PRT
 <213> Hevea brasiliensis

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<400> 8

Met Pro Leu Gly Thr Val Glu Val Leu Leu Val Gly Ala Lys Gly Leu
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Glu Asn Thr Asp Phe Leu Asn Gly Val Asp Pro Tyr Val Val Leu Ala
 20 25 30

Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Ser
 35 40 45

Glu Pro Glu Trp Asn Glu Lys Phe Ser Phe Glu Val Ser Asp Gly Asp
 50 55 60

Thr Glu Leu Thr Leu Lys Ile Met Asp Ser Asp Val Gly Ala Ala Asp
 65 70 75 80

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Pro Leu Phe Leu Glu
 85 90 95

Gly Asn Leu Pro Ser Thr Ala Tyr Lys Val Val Lys Glu Gln Glu Tyr
 100 105 110

Lys Gly Glu Ile Thr Val Gly Leu Thr Phe Thr Pro Glu Val Glu Met
 115 120 125

Asp Asn Val Gly Val Asp Gly Tyr Asp Phe Arg Leu
 130 135 140

<210> 9

<211> 874

<212> DNA

<213> Triticum aestivum

<400> 9

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 tggataagct acgaatctac ttattgattg gtatcgtttt ctaatattca aatttgtaat 780
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 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 874

<210> 10

<211> 144

<212> PRT

<213> Triticum aestivum

<400> 10

Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
 1 5 10 15

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<400> 12

Met Ser Ile Gln Gly Gln Ile Leu Glu Val Arg Val Thr Gly Cys Arg
 1 5 10 15
 Lys Leu Arg Asp Thr Glu Phe Phe Thr Arg Gln Asp Pro Tyr Val Cys
 20 25 30
 Ile Glu Tyr Ala Thr Asn Lys Phe Arg Thr Arg Thr Cys Thr Asp Gly
 35 40 45
 Gly Arg Asn Pro Thr Phe Asp Glu Lys Phe His Ile Pro Leu Ile Glu
 50 55 60
 Gly Leu Arg Glu Leu Thr Val Thr Val Trp Asn Ser Asn Thr Leu Thr
 65 70 75 80
 His Asp Asp Phe Ile Gly Asn Gly Arg Val Gln Leu His Lys Val Leu
 85 90 95
 Thr Arg Gly Tyr Asp Asp Ala Ser Trp Pro Leu Gln Thr Arg His Met
 100 105 110
 Arg Ser Ala Gly Glu Val Thr Leu Ile Met His Phe Asp Val Ser Ala
 115 120 125
 Met Lys Asn Lys Pro Gly Lys Ile Ser Ala Ala Ser Thr Thr His Ser
 130 135 140
 Val Leu Pro Val Pro Val Pro Ala Val Pro Tyr Ala Ala Pro Ser Pro
 145 150 155 160
 Ser Tyr Ala Leu Pro Pro Ala Gly Tyr Pro Ala Val Pro Pro Tyr Gln
 165 170 175
 Ser Tyr Pro Ala Ser His Val Pro Ala Pro Tyr Pro Thr Ser Ala Tyr
 180 185 190
 Pro His Pro Pro Pro Ser Leu Leu Ala Arg Asp Val Glu His Ala Ala
 195 200 205
 Tyr Pro Pro Thr Ser Thr Thr Tyr Pro Pro Gln Pro Tyr Pro Pro Gln
 210 215 220
 Pro Gln Gly Gln Thr Tyr Pro Pro Gln Pro Gln Gly Glu Thr Tyr Gln
 225 230 235 240
 Pro Gln Pro Gln Arg Glu Thr Tyr Pro Pro Gln Pro Gln Val Gln Pro
 245 250 255
 Tyr Pro Pro Lys Pro Gln Gly Gln Pro Tyr Pro Pro Gln Pro Gln Gly
 260 265 270
 Gln Pro Tyr Pro Pro Gln Pro Tyr Gly Gln Thr Tyr Pro Pro Pro Pro
 275 280 285
 Lys Gly Gln Pro Thr Tyr Pro Pro Ala Pro Tyr Pro Ser Thr Tyr Pro
 290 295 300

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Pro Ala Pro Tyr
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<210> 13
<211> 1172
<212> DNA
<213> Glycine max

<400> 13
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<210> 14
<211> 258
<212> PRT
<213> Glycine max

<400> 14
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Val Ser Cys Ser Lys Leu Lys Asp Thr Glu Trp Ile Ser Arg Gln Asp
20 25 30
Pro Tyr Val Cys Val Glu Tyr Gly Ser Thr Lys Phe Arg Thr Arg Thr
35 40 45
Cys Thr Asp Gly Gly Lys Asn Pro Val Phe Gln Glu Lys Phe Ile Phe
50 55 60
Pro Leu Ile Glu Gly Leu Arg Glu Leu Asn Val Leu Val Trp Asn Ser
65 70 75 80
Asn Thr Leu Thr Phe Asp Asp Phe Ile Gly Ser Gly Lys Ile Gln Leu
85 90 95
His Lys Val Leu Ser Gln Gly Phe Asp Asp Ser Ala Trp Pro Leu Gln
100 105 110
Thr Lys Thr Gly Arg Tyr Ala Gly Glu Val Lys Val Ile Leu His Tyr
115 120 125

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Ala Ile Ala Asn Gln Arg His Lys Leu Val Ser Gly His Ala Pro Ser
 130 135 140

Ala Pro Pro Tyr Val Ala Thr Ala Thr Pro Pro Val Pro Ser Ser Tyr
 145 150 155 160

Ser Thr Ser Tyr Pro Pro Pro Pro Ser Ala Thr Ser Tyr Pro Pro Pro
 165 170 175

Pro Ser Pro Pro Ser Ala Thr Pro Tyr His Thr Thr Gly Ser Tyr Ser
 180 185 190

Tyr Pro Pro Pro Pro Pro Pro Pro Pro Thr Ala Tyr Pro Pro Tyr Ser Ser
 195 200 205

His Ser Ser Pro Tyr Pro Pro Ser Ser Tyr Pro Pro Gln Pro Ser Ser
 210 215 220

Tyr Pro Pro Pro Pro Pro Pro Ser Ser Tyr Pro Pro Ala Ser Ala Tyr
 225 230 235 240

Pro Tyr Pro Pro Pro Ala Gly Tyr Pro Ser Gly Ile Tyr Pro Pro Pro
 245 250 255

Pro Tyr

<210> 15
 <211> 757
 <212> DNA
 <213> Zea mays

<400> 15
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 cgtggactct ctcaagttct ttggttgctt ggtggtgttt cgggttggat gtagtttttg 660
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<210> 16
 <211> 157
 <212> PRT
 <213> Zea mays

<400> 16
 Met Gly Lys Gly Val Leu Lys Val His Leu Val Asp Ala Lys Gly Leu
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Ser Gly Asn Asp Phe Leu Gly Lys Leu Asp Pro Tyr Val Ile Met Gln
 20 25 30

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Tyr Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg
 35 40 45
 Asn Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala
 50 55 60
 Ala Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn
 65 70 75 80
 Phe Ser Ser Asp Asp Phe Leu Gly Glu Ala Thr Ile Asp Val Thr Asp
 85 90 95
 Ile Val Ser Leu Gly Ala Glu Arg Gly Thr Tyr His Leu Asn Ala Ala
 100 105 110
 Lys His Asn Val Val Leu Ala Asp Lys Thr Tyr His Gly Glu Ile Lys
 115 120 125
 Val Ala Ile Thr Phe Thr Ser Thr Gln Thr Gln Val Gln Glu Asp Gly
 130 135 140
 Gly Ala Ile Gly Gly Trp Arg His Ser Ser Phe Asn Gln
 145 150 155

<210> 17
 <211> 422
 <212> DNA
 <213> Hevea brasiliensis

<220>
 <221> unsure
 <222> (410)

<220>
 <221> unsure
 <222> (415)

<400> 17
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 gtaagattga tccatgtgtt atcgtgaagt acaaaaacca agagcgcgag agcagtgtcg 240
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 cagggcaagg tgaagagtac aagctcattt taaaaatcat ggacaaggac accttctctg 360
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<210> 18
 <211> 102
 <212> PRT
 <213> Hevea brasiliensis

<220>
 <221> UNSURE
 <222> (99)

<220>
 <221> UNSURE
 <222> (101)

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<400> 18

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 1 5 10 15

Arg Gly Thr Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Lys
 20 25 30

Tyr Lys Asn Gln Glu Arg Glu Ser Ser Val Ala Arg Gly Gln Gly Gly
 35 40 45

Asn Pro Val Trp Asn Glu Lys Leu Thr Phe Lys Val Glu Tyr Pro Gly
 50 55 60

Gln Gly Glu Glu Tyr Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Thr
 65 70 75 80

Phe Ser Ala Asp Asp Leu Leu Gly His Ala Thr Ile Tyr Val Lys Asp
 85 90 95

Leu Leu Xaa Leu Xaa Met
 100

<210> 19

<211> 486

<212> DNA

<213> Glycine max

<220>

<221> unsure

<222> (430)

<220>

<221> unsure

<222> (464)

<220>

<221> unsure

<222> (486)

<400> 19

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 acaaaggcca agagaagagg agtgggtgtcg ctaatggcaa aggcaaaaat ccggtatgga 180
 atgagaaatt tatcttcaaa gtagaatatc ctggatcaag caatcaacac aagctcatcc 240
 tcaaaattat ggataaagac ttatatacag acgacttcgt cggagaagca ataatccatg 300
 taggggattt attggcccaa ggagtagaga acggaggagc caaattacag actctcaagt 360
 atagagtggg tcgtgctaac aagtcttatt gtgggtgaaat tgatgttggg tgttactttt 420
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 gtgacn 486

<210> 20

<211> 154

<212> PRT

<213> Glycine max

<220>

<221> UNSURE

<222> (136)

WO 00/60088

PCT/US00/09110

<220>

<221> UNSURE

<222> (147)

<400> 20

Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Gly Leu
 1 5 10 15

Arg Asp Thr Asp Ile Phe Gly Lys Met Asp Pro Tyr Val Leu Ile Gln
 20 25 30

Tyr Lys Gly Gln Glu Lys Arg Ser Gly Val Ala Asn Gly Lys Gly Lys
 35 40 45

Asn Pro Val Trp Asn Glu Lys Phe Ile Phe Lys Val Glu Tyr Pro Gly
 50 55 60

Ser Ser Asn Gln His Lys Leu Ile Leu Lys Ile Met Asp Lys Asp Leu
 65 70 75 80

Tyr Thr Asp Asp Phe Val Gly Glu Ala Ile Ile His Val Gly Asp Leu
 85 90 95

Leu Ala Gln Gly Val Glu Asn Gly Gly Ala Lys Leu Gln Thr Leu Lys
 100 105 110

Tyr Arg Val Val Arg Ala Asn Lys Ser Tyr Cys Gly Glu Ile Asp Val
 115 120 125

Gly Cys Tyr Phe Tyr Pro Glu Xaa Trp Glu Asp Lys Phe Cys Gly Lys
 130 135 140

Lys Thr Xaa Glu Asp Gly Lys Glu Ser Asp
 145 150

<210> 21

<211> 862

<212> DNA

<213> Glycine max

<400> 21

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 ggagttgtgt gacactgatt tctttggtag tatggacccg tatgttggtga tacaatacaa 180
 cggccaagag caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga 240
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 aatcatggac aaggatcttt tatctgcaga tgactttgtt ggtcaagcca tagtctatgt 360
 ggaagattta ttagccatag gggtagagga tggcgcggt gagctacaac ctctaaagta 420
 cagagtaatt cgtgcagatc aatcttattg tggagaaatt gatcttggtg taacttttaa 480
 ggtggaagaa gagttcaatg gagaagctaa acgaggatcg aaggacagta aatagtattt 540
 gcaatagcag ttggccaaca tgaatatcaa ttgatttcaa tggagatttt ggaatcatca 600
 tcatgtagt agtttcatct ttttagttgt atatgatcct tttggaaagt aggatcaatg 660
 catagataaa ttactaaat tttatgccat caaattagta atagtatgca ttattaatct 720
 tctaatttat cttcaccata attaatctca ttgatgattc aatcttgtag ttccttaaca 780
 tctatatact atatgggttt gaacctttaa aaaaaagaa aaaaaaaaaa aaaaaaaaaa 840
 aaaaaaaaaa aaaaaaaaaa aa 862

<210> 22

<211> 151

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<212> PRT
 <213> Glycine max

<400> 22
 Met Ala Ile Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu
 1 5 10 15
 Cys Asp Thr Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln
 20 25 30
 Tyr Asn Gly Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn
 35 40 45
 Asn Pro Val Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr
 50 55 60
 Leu Ser Asn Ser Tyr Lys Ile Ile Leu Lys Ile Met Asp Lys Asp Leu
 65 70 75 80
 Leu Ser Ala Asp Asp Phe Val Gly Gln Ala Ile Val Tyr Val Glu Asp
 85 90 95
 Leu Leu Ala Ile Gly Val Glu Asp Gly Ala Ala Glu Leu Gln Pro Leu
 100 105 110
 Lys Tyr Arg Val Ile Arg Ala Asp Gln Ser Tyr Cys Gly Glu Ile Asp
 115 120 125
 Leu Gly Ile Thr Phe Lys Val Glu Glu Glu Phe Asn Gly Glu Ala Lys
 130 135 140
 Arg Gly Ser Lys Asp Ser Lys
 145 150

<210> 23
 <211> 860
 <212> DNA
 <213> Triticum aestivum

<400> 23
 tccaaacgcg acctcatcag agcaagaccc ggaggaaaca aggagaggcc agagcggcct 60
 gtcacaaggc aaaggacaga ggaggtgctt gttcaggtct cctgctagat ccggaggcga 120
 tgggcagggg cgtgctggag gtgcatctcg tcgacgcaa gggcctcttc ggcagcgatt 180
 tcctagggaa gatcgaccgc tatgtaatcg tgcaataccg gagccaggag cgcaagagca 240
 gcacctccag agatgagggg aggaaccoga gctggaacga ggtgttccgg ttccagatca 300
 actcctctgc ggccaacggg cagcacaagc tcttctcccg gatcatggac caccgacaact 360
 tctccagcga cgacttcctc ggccaagcga cgatcaacgt gaccgatctg atcagcaccg 420
 gcatggagag cggcgcgctc cagctgaacg cggcaaagta cagcgttgtg tccgctgata 480
 actcatacca cggcgagatc agagtaggcc tcacgttcac cgccaccaag gttgaagaag 540
 acggagggca ggtcggaggc tggacgcaca gctotgcga gtagagcatg taacgtcctt 600
 gcccttcgct cgtagcttta gtgttgatg ctatgatgtc cgtgactgaa tgatgtgatt 660
 ccaagtgtat gtacgttgca cctgtagtag ctttttagaa gatgtatatg tactagtagc 720
 cagaagtcag aactcgtagc aggctagagg cgtcaattcc gtttaattaat tgtcgatttg 780
 tggttcttat tttaggggga attgtgattc tggatgcgaa caccaaaaaa aaaaaaaaaa 840
 aaaaaaaaaa aaaaaaaaaa 860

<210> 24
 <211> 154
 <212> PRT
 <213> Triticum aestivum

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<400> 24

Met Gly Arg Gly Val Leu Glu Val His Leu Val Asp Ala Lys Gly Leu
 1 5 10 15

Phe Gly Ser Asp Phe Leu Gly Lys Ile Asp Pro Tyr Val Ile Val Gln
 20 25 30

Tyr Arg Ser Gln Glu Arg Lys Ser Ser Thr Ser Arg Asp Glu Gly Arg
 35 40 45

Asn Pro Ser Trp Asn Glu Val Phe Arg Phe Gln Ile Asn Ser Ser Ala
 50 55 60

Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp Asn
 65 70 75 80

Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr Asp
 85 90 95

Leu Ile Ser Thr Gly Met Glu Ser Gly Ala Ser Gln Leu Asn Ala Ala
 100 105 110

Lys Tyr Ser Val Val Ser Ala Asp Asn Ser Tyr His Gly Glu Ile Arg
 115 120 125

Val Gly Leu Thr Phe Thr Ala Thr Lys Val Glu Glu Asp Gly Gly Gln
 130 135 140

Val Gly Gly Trp Thr His Ser Ser Arg Glu
 145 150

<210> 25

<211> 914

<212> DNA

<213> *Oryza sativa*

<400> 25

cttttggaag aaaagatcac ccaaaaccct atattccata gttgagacac aagatttttt 60
 gaagccaagt ttgcgatta catcaaaggg ttcttttgat gcgaccaatg ctgtgaagag 120
 tgtaactagc agtatctcta gcgcttcagg gaagcatgct gctgacgata caagagaatt 180
 tgttgagag ctgaacatta cagtggtaag aggtattcag ttggccgtca gagacatgct 240
 aacgagcgat ccatatgttg ttctaacact tggggagcag aaagctcaaa ccaactgttaa 300
 accgagtgac ttgaaccag tatggaatga ggtgcttaag atatcaattc ctogaaatta 360
 tggacctctt aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg 420
 ggaagcggag atagatcttc aaccaatgat cacagccgtc atggcctttg gagatccctc 480
 gcgtgttggg gacatgcaaa ttggaagggt gttcatgacc aaagacaatg ccctggtgaa 540
 agatagcact gtcaatgttg tgcgggcaa ggtaaaacag gaagtgcacc taaagttgca 600
 gaatgtagaa tcaggtgaga tggagttaga actggaatgg gttccaatac cctagattaa 660
 taaagctcga ttggttctct gccaaaaaaa attactcaag aagcgtcagt tttgtaattt 720
 aaatgaatgg cttcaaatcc cgtgtactta ctgaatctct gtcttcaaca ttttgccac 780
 ccgaacgaaa ttcgtaaaaa tgccattgta aaatatcatg ttgtaatccg tcggctgcac 840
 tcacgaccaa ttatattatt ctttagtgaa gtgtgctttc aaccogttgt cataaaaaaa 900
 aaaaaaaaaa aaaa 914

<210> 26

<211> 217

<212> PRT

<213> *Oryza sativa*

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<400> 26

Phe Trp Lys Lys Arg Ser Pro Lys Thr Leu Tyr Ser Ile Val Glu Thr
 1 5 10 15

Gln Asp Phe Leu Lys Pro Ser Leu Arg Ile Thr Ser Lys Gly Ser Phe
 20 25 30

Asp Ala Thr Asn Ala Val Lys Ser Val Thr Ser Ser Ile Ser Ser Ala
 35 40 45

Ser Gly Lys His Val Ala Asp Asp Thr Arg Glu Phe Val Gly Glu Leu
 50 55 60

Asn Ile Thr Val Val Arg Gly Ile Gln Leu Ala Val Arg Asp Met Leu
 65 70 75 80

Thr Ser Asp Pro Tyr Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln
 85 90 95

Thr Thr Val Lys Pro Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu
 100 105 110

Lys Ile Ser Ile Pro Arg Asn Tyr Gly Pro Leu Lys Leu Glu Val Tyr
 115 120 125

Asp His Asp Thr Phe Ser Ala Asp Asp Ile Met Gly Glu Ala Glu Ile
 130 135 140

Asp Leu Gln Pro Met Ile Thr Ala Val Met Ala Phe Gly Asp Pro Ser
 145 150 155 160

Arg Val Gly Asp Met Gln Ile Gly Arg Trp Phe Met Thr Lys Asp Asn
 165 170 175

Ala Leu Val Lys Asp Ser Thr Val Asn Val Val Ser Gly Lys Val Lys
 180 185 190

Gln Glu Val His Leu Lys Leu Gln Asn Val Glu Ser Gly Glu Met Glu
 195 200 205

Leu Glu Leu Glu Trp Val Pro Ile Pro
 210 215

<210> 27

<211> 770

<212> DNA

<213> Oryza sativa

<400> 27

ccacgcgtcc ggccctgtgca acatcatcat caagaagaag aagagatcaa cggcaagaag 60
 actagcgact agcgagagat cgatcgaaga gaagaggaga gatggtgcac gggaagctgg 120
 aggtcctcct cgtctgcgcc aagggcctcg aggacactga cttcttgaac gacatggacc 180
 cctacgtgat cctcacctgc cgcactcagg agcagaaaag cagcgttgca aaaggagcag 240
 gaagcgagcc tgaatggaac gagaccttcg tcttcaccgt ctccgacgat gttccacagc 300
 tcaatgtcaa gatcatggac agtcatgcct tctcagctga cgatttcgtc ggtgaagcaa 360
 acattcctct ggagcctgtg ttcctggaag gcagccttcc tccagccgtc caccgtgtcg 420
 tcaaggagga gaagtactgt ggagagatca aggttgctct caccttcact ccagcagcgg 480
 aaactcgcca tcatcacaac cagcagaacg agggggaggg ttacagcagc tggaaactgat 540
 tgccctgctac taatgagcat caacgagagg agatcttgct tcaagaatta atgtgcttgt 600
 caacaatact ccgtgctatg atgtcctaag aactgaaaca tccatttata tgtatatccc 660

WO 00/60088

PCT/US00/09110

agaccattga cttgctctgc cttaaatttg tatatttttt actacaaaga tgtgatgggtg 720
 tgaaatccag aatattttta tcgaaaaaaa aaaaaaaaaa aaaaaaaaag 770

<210> 28
 <211> 145
 <212> PRT
 <213> Oryza sativa

<400> 28
 Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu
 1 5 10 15
 Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser
 35 40 45
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val
 50 55 60
 Pro Gln Leu Asn Val Lys Ile Met Asp Ser Asp Ala Phe Ser Ala Asp
 65 70 75 80
 Asp Phe Val Gly Glu Ala Asn Ile Pro Leu Glu Pro Val Phe Leu Glu
 85 90 95
 Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Glu Glu Lys Tyr
 100 105 110
 Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Pro Ala Ala Glu Thr
 115 120 125
 Arg His His His Asn His Glu Asn Glu Gly Glu Gly Tyr Ser Ser Trp
 130 135 140

Asn
 145

<210> 29
 <211> 958
 <212> DNA
 <213> Glycine max

<400> 29
 gcacagaaag aaaaaagttg gatccagcca aattccagct ccaatttgta actcactgct 60
 tcaggcattt ctggcacaat tttttccacc tttatttcaa ctttaagact ccacagaaag 120
 aagcatattc ctgagtcaaa tagttctgtc catatagaat ttgtgaagtg agagtccaac 180
 ctttcatttt caattttcaa agatgcctcg tggaacactt gaagttgttc tgatcagcgc 240
 caaaggaatc gatgacaatg attttctctc cagcatagat ccttatgtga ttctcacata 300
 cagggcacag gagaaaaaga gcaactgtgca agaagatgct ggatccaagc cacaatggaa 360
 tgagagcttt cttttcactg tctctgacag tgcttctgaa cttaatctga agataatgga 420
 taaagacaac tttagtcaag atgattgtct tggcgaggca accattcatt tagatccagt 480
 gtttgaagcc ggtagcattc cagaaactgc ttacaaggtt gtgaaggacg aagaatattg 540
 tgggtgagatt aaggtggctc tcactttcac tgctgagaga aatgaggagc agggttatga 600
 tgcacctgaa gagagctatg gtggatggaa agaatccagt ggggaatatt aaagtgaag 660
 aagaatttac atacttcaat ggccagactt acctttataa tgaaaaataa gcagttttgg 720
 tgtcactctt aggcaatttc cattattgtg ttttctggtg tgaagatcca atagtgttgt 780
 gcttttaggt tgcattcctc cttttggata ttaaagtaca ttatgcttga tatattatct 840

WO 00/60088

PCT/US00/09110

tttatgcac agttaaacat tagaagagca gtgctatattt atttaaaaaa aaaaaaaaaa 900
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaa 958

<210> 30
 <211> 149
 <212> PRT
 <213> Glycine max

<400> 30
 Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile
 1 5 10 15
 Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val Gln Glu Asp Ala Gly Ser
 35 40 45
 Lys Pro Gln Trp Asn Glu Ser Phe Leu Phe Thr Val Ser Asp Ser Ala
 50 55 60
 Ser Glu Leu Asn Leu Lys Ile Met Asp Lys Asp Asn Phe Ser Gln Asp
 65 70 75 80
 Asp Cys Leu Gly Glu Ala Thr Ile His Leu Asp Pro Val Phe Glu Ala
 85 90 95
 Gly Ser Ile Pro Glu Thr Ala Tyr Lys Val Val Lys Asp Glu Glu Tyr
 100 105 110
 Cys Gly Glu Ile Lys Val Ala Leu Thr Phe Thr Ala Glu Arg Asn Glu
 115 120 125
 Glu Gln Gly Tyr Asp Ala Pro Glu Glu Ser Tyr Gly Gly Trp Lys Glu
 130 135 140
 Ser Ser Gly Glu Tyr
 145

<210> 31
 <211> 695
 <212> DNA
 <213> Triticum aestivum

<400> 31
 gcacgaggag agatccaaga ctaggccggc cggccggagg agatcgagaa ggaggaggag 60
 acatggtgcg cgggaagctg gaggtgctgc tcgtctccgc caagggcctc gacgactccg 120
 atttcttcaa tagcatggac ccgtacgtga tcctcacctg ccgcagccac gagcagaaga 180
 gcaccgtcgc atcaggagca gggagcgagc ctgagtggaa cgagaccttc gtcttcgccg 240
 tctccggcga cgctccggag ctccagggtca agatcatgga cagcgacgcc ctctcggccg 300
 acgacctcgt cggagaagca tgtatcccgc tggaggctgt gctccaggag ggcagcctgc 360
 cgccggccgt gcaccgggtc gtcaaggagc aggagtaccg cggggagatc aagatcgcg 420
 tcaccttcac cccggcagag gaaaacgagg aggaggagga gagctacggc ggctggaatc 480
 agtccacctg aaaaaggcca gcgagccagc aagatgggtc tgtatgtctg actgtcataa 540
 tggatagaaa ggctttggat atccttgatg tgtgtgacag acagggcatt caggaaaaacg 600
 agtaaaaata ggggaaatat gtatcgatgc atgcatgaag tactaatcaa gcaattcacc 660
 gcatcgtttt gtattgcaaa aaaaaaaaaa aaaaaa 695

<210> 32
 <211> 142

WO 00/60088

PCT/US00/09110

<212> PRT
 <213> Triticum aestivum

<400> 32
 Met Val Arg Gly Lys Leu Glu Val Leu Leu Val Ser Ala Lys Gly Leu
 1 5 10 15
 Asp Asp Ser Asp Phe Phe Asn Ser Met Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Cys Arg Ser His Glu Gln Lys Ser Thr Val Ala Ser Gly Ala Gly Ser
 35 40 45
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Ala Val Ser Gly Asp Ala
 50 55 60
 Pro Glu Leu Arg Val Lys Ile Met Asp Ser Asp Ala Leu Ser Ala Asp
 65 70 75 80
 Asp Leu Val Gly Glu Ala Cys Ile Pro Leu Glu Ala Val Leu Gln Glu
 85 90 95
 Gly Ser Leu Pro Pro Ala Val His Arg Val Val Lys Asp Glu Glu Tyr
 100 105 110
 Arg Gly Glu Ile Lys Ile Ala Leu Thr Phe Thr Pro Ala Glu Glu Asn
 115 120 125
 Glu Glu Glu Glu Glu Ser Tyr Gly Gly Trp Asn Gln Ser Thr
 130 135 140

<210> 33
 <211> 617
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (421)

<400> 33
 cacgccgcct ccatgtgggt ggggaggcaa acgcgttcgt ccatctctga aactcaaacg 60
 ccttgtattg gagcatacta caggagtact tctgtacaaa tataaataacc cctggcgagt 120
 tgggttgggt ctatctcgca atcgaggcgt tttttttctg cttcgtaagt tcgtggtcga 180
 tccagcgagc gagcgagcag accggcggcc aaccgcggag ggagagatgg cgcaggggac 240
 gctggagggtg cttctcgtcg gagccagggg cctcgagaac accgattacc tgagcaacat 300
 ggacccctac gcgcttctgc aatgtcgtc ccacgagcag aagagcagcg tcgcatctgg 360
 caaaggctgt gaacctgagt ggaacgagac cttcgtgttc accgtctcca acggcgacaca 420
 ngagctgttc atcaagctcc tggacagtga cgggtggcact gatgacgatt ttgttggtga 480
 agcaacgatt cctctggaag ccagtttaca cggaaggaa gcatttccttc cgactgttta 540
 caatgttgtg aaagacgaag aataccgcgg agaaatcaaa gttggcctca cgttcactcc 600
 agaggtaaac catctca 617

<210> 34
 <211> 202
 <212> PRT
 <213> Zea mays

WO 00/60088

PCT/US00/09110

<220>
 <221> UNSURE
 <222> (140)

<400> 34
 Thr Pro Pro Pro Cys Gly Trp Gly Gly Lys Arg Val Arg Pro Ser Leu
 1 5 10 15
 Lys Leu Lys Arg Leu Val Leu Glu His Thr Thr Gly Val Leu Leu Tyr
 20 25 30
 Lys Tyr Lys Tyr Pro Trp Arg Val Gly Leu Gly Leu Ser Arg Asn Arg
 35 40 45
 Gly Val Phe Phe Leu Leu Arg Lys Phe Val Val Asp Pro Ala Ser Glu
 50 55 60
 Arg Ala Asp Arg Arg Pro Thr Ala Glu Gly Glu Met Ala Gln Gly Thr
 65 70 75 80
 Leu Glu Val Leu Leu Val Gly Ala Arg Gly Leu Glu Asn Thr Asp Tyr
 85 90 95
 Leu Ser Asn Met Asp Pro Tyr Ala Leu Leu Gln Cys Arg Ser His Glu
 100 105 110
 Gln Lys Ser Ser Val Ala Ser Gly Lys Gly Cys Glu Pro Glu Trp Asn
 115 120 125
 Glu Thr Phe Val Phe Thr Val Ser Asn Gly Ala Xaa Glu Leu Phe Ile
 130 135 140
 Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp Asp Phe Val Gly Glu
 145 150 155 160
 Ala Thr Ile Pro Leu Glu Ala Ser Leu His Gly Lys Glu Ala Phe Leu
 165 170 175
 Pro Thr Val Tyr Asn Val Val Lys Asp Glu Glu Tyr Arg Gly Glu Ile
 180 185 190
 Lys Val Gly Leu Thr Phe Thr Pro Glu Val
 195 200

<210> 35
 <211> 544
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (415)

<220>
 <221> unsure
 <222> (478)

<220>
 <221> unsure
 <222> (494)

WO 00/60088

PCT/US00/09110

<220>

<221> unsure

<222> (509)

<220>

<221> unsure

<222> (515)

<220>

<221> unsure

<222> (531)..(532)

<220>

<221> unsure

<222> (542)

<400> 35

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gattacctct gtaacatgga tccgtatgca attctcaagt gccgttcaca ggagcagaag 180
agcagtattg caactggaaa aggaactacc cctgagtgga atgaaaactt tatcttcact 240
gtgtctgacc ggacaacaga cttggtaatc aagcttatgg acagtgatac aggcacagca 300
gatgactttg ttggtgaagc aacgattcca ttggaagcag tgtatactga aaggagcatt 360
ccaccaacac tctataatgt tgtgaaaggt gaaaaatact gcggggaaat caaantgggc 420
tcacattcac tctgaggat actcgcaagc ggggtctcaa aggacttcgt ggtggaanca 480
tcattcttaag ctantcttta gggtcacana cacancacaa tcatcgcttg nncctcaccg 544
tnat

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<210> 36

<211> 130

<212> PRT

<213> Zea mays

<220>

<221> UNSURE

<222> (118)

<400> 36

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Met Val His Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
  1              5              10              15

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```

Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Ile Leu Lys
      20              25              30

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```

Cys Arg Ser Gln Glu Gln Lys Ser Ser Ile Ala Thr Gly Lys Gly Thr
      35              40              45

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```

Thr Pro Glu Trp Asn Glu Asn Phe Ile Phe Thr Val Ser Asp Arg Thr
      50              55              60

```

```

Thr Asp Leu Val Ile Lys Leu Met Asp Ser Asp Thr Gly Thr Ala Asp
      65              70              75              80

```

```

Asp Phe Val Gly Glu Ala Thr Ile Pro Leu Glu Ala Val Tyr Thr Glu
      85              90              95

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```

Arg Ser Ile Pro Pro Thr Leu Tyr Asn Val Val Lys Gly Glu Lys Tyr
      100              105              110

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WO 00/60088

PCT/US00/09110

Cys Gly Glu Ile Lys Xaa Gly Leu Thr Phe Thr Pro Glu Asp Thr Arg
 115 120 125

Lys Arg
 130

<210> 37
 <211> 459
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (435)

<400> 37
 gccgagcttt ccatttttca actcctagtc ctatacatag agcggaaccc cggggctcgg 60
 atcggatcta cagcaattag tctcgacctt cagtcgtgcc gcctgctcat cagcatataa 120
 ttcctgatcg agcgagcggg agaggaaggg gagatcaggg cgggagagaa gatggcgag 180
 gggacgctgg aggtgctgct cgtgggagcc aagggcctcg agaacaccga ctacctctgc 240
 aacatggacc cgtacgcggg tctaaaatgc acctcgcagg agcaaaagag caccgtcgcc 300
 tctggaaagg gaagtgatcc tgagtggaaac gaaacctttg tgttcaccgt ctctgagaat 360
 gcaactgagc ttgtcatcaa gctactggac agtgatgggt gcacggacga cgacagcggt 420
 ggtgaagcaa cgatncattg gatggagtgt acactgaag 459

<210> 38
 <211> 87
 <212> PRT
 <213> Triticum aestivum

<400> 38
 Met Ala Gln Gly Thr Leu Glu Val Leu Leu Val Gly Ala Lys Gly Leu
 1 5 10 15

Glu Asn Thr Asp Tyr Leu Cys Asn Met Asp Pro Tyr Ala Val Leu Lys
 20 25 30

Cys Thr Ser Gln Glu Gln Lys Ser Thr Val Ala Ser Gly Lys Gly Ser
 35 40 45

Asp Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Glu Asn Ala
 50 55 60

Thr Glu Leu Val Ile Lys Leu Leu Asp Ser Asp Gly Gly Thr Asp Asp
 65 70 75 80

Asp Ser Val Gly Glu Ala Thr
 85

<210> 39
 <211> 417
 <212> DNA
 <213> Oryza sativa

<400> 39
 atcgtcaact cagctcctct cttttcttccc ctcccccgct cctccgcgag acgacccgcg 60
 cccgtagcca tccatgtcga tacaaggcca gatcctcgaa gtcagagtca ctgggtgcag 120
 gaagctgagg gacacggagt tcttcacgcg gcaggatccc tacgtctgca tcgagtatgc 180
 caccaacaag ttccgcaccc gcacctgcac cgatggggga aggaacccta cttttgacga 240
 gaagtttcat atacctctca ttgagggggt tcgtgagcta accgtcacag tgtggaacag 300

WO 00/60088

PCT/US00/09110

caacacgctc acccatgatg atttcattgg caatggcagg gtgcaagctg cataaggtgc 360
 ttacgcgtgg ctatgatgat gcctcaaggg ccctccagac acgccatatg aggtctg 417

<210> 40
 <211> 83
 <212> PRT
 <213> Oryza sativa

<400> 40
 Leu Glu Val Arg Val Thr Gly Cys Arg Lys Leu Arg Asp Thr Glu Phe
 1 5 10 15
 Phe Thr Arg Gln Asp Pro Tyr Val Cys Ile Glu Tyr Ala Thr Asn Lys
 20 25 30
 Phe Arg Thr Arg Thr Cys Thr Asp Gly Gly Arg Asn Pro Thr Phe Asp
 35 40 45
 Glu Lys Phe His Ile Pro Leu Ile Glu Gly Leu Arg Glu Leu Thr Val
 50 55 60
 Thr Val Trp Asn Ser Asn Thr Leu Thr His Asp Asp Phe Ile Gly Asn
 65 70 75 80

Gly Arg Val

<210> 41
 <211> 550
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (534)

<400> 41
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 ctctctctct tctctgact ccattgtcgtc gataacgggc atccagggcc aacctcttga 120
 ggttacgggt gtttctgtgt ccaagttgaa ggacacagaa tggatttcaa ggcaagatcc 180
 gtacgtttgt gttgagtatg gcagcacaaa gttccgaacc agaacctgca cagacggcgg 240
 aaaaaatccg gtattccaag agaagttcat ctccccctc attgaaggcc ttcgggagct 300
 caatgtcctt gtttggaaca gcaatactct caccttgac gattttatag gaagcggaaa 360
 gattcaattg cacaaggttc tctctcaagg cttcgatgac tctgcttggc cacttcagac 420
 caaaactggc agatacgtg gtgaagtcaa agtcatattg cattacgcaa ttgcaaatca 480
 tcaaaggcat aaatcagtg caagccatgc tccatcaaca cctccgtatg tggnaacaac 540
 aactcctccc 550

<210> 43
 <211> 424
 <212> DNA
 <213> Zea mays

<220>
 <221> unsure
 <222> (169)..(170)

<220>
 <221> unsure
 <222> (172)..(173)

WO 00/60088

PCT/US00/09110

<220>
 <221> unsure
 <222> (178)..(179)..(180)

<220>
 <221> unsure
 <222> (183)

<400> 43
 acccacgcgt ccgcccacgc gtccgcccgc cgcgcgcaag agaggagaga gcgcctccaa 60
 cgccacctgg aggagaggac agcgcgccag ggagggggag gaggaagaag aacatgggga 120
 agggcgctcct gaaggtgcac ctcgctgcag ccaaggggct ctccggcann gnnttctnnn 180
 ggnagctgga cccctacgtg atcatgcagt accggagcca ggagcgcaag agcagcgctcg 240
 cccgagacca aggaaggaac ccgtgctgga acgaggtgtt caagttccag atcaactcgg 300
 ccgcggccaa cgtgcagcac aagctcatcc tccggatcat ggaccacgac aacttctcca 360
 gcgacgactt ctcggcgagg cgacgatcga cgtgacggac atcgtcagcc tgggcgcgca 420
 gcgc 424

<210> 44
 <211> 85
 <212> PRT
 <213> Zea mays

<220>
 <221> UNSURE
 <222> (18)..(19)

<220>
 <221> UNSURE
 <222> (21)..(22)..(23)

<400> 44
 Gly Lys Gly Val Leu Lys Val His Leu Val Asp Ala Lys Gly Leu Ser
 1 5 10 15
 Gly Xaa Xaa Phe Xaa Xaa Xaa Leu Asp Pro Tyr Val Ile Met Gln Tyr
 20 25 30
 Arg Ser Gln Glu Arg Lys Ser Ser Val Ala Arg Asp Gln Gly Arg Asn
 35 40 45
 Pro Cys Trp Asn Glu Val Phe Lys Phe Gln Ile Asn Ser Ala Ala Ala
 50 55 60
 Asn Val Gln His Lys Leu Ile Leu Arg Ile Met Asp His Asp Asn Phe
 65 70 75 80
 Ser Ser Asp Asp Phe
 85

<210> 45
 <211> 548
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (291)

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<220>
 <221> unsure
 <222> (349)

<220>
 <221> unsure
 <222> (417)

<220>
 <221> unsure
 <222> (437)

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 <222> (446)

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 <222> (525)

<220>
 <221> unsure
 <222> (528)

<220>
 <221> unsure
 <222> (544)

<400> 45
 ttaaattgta agaattttgc tgacttgtaa gcttcagaga cgaagacaca cggtttagagt 60
 gagaaagaga tggcaattgg gttcatggag gtgcagcttg tgaaagcaaa ggagttgtgt 120
 gacactgatt tctttggtag tatggaccgg tatggttgta tacaatacaa cggccaagag 180
 caaaggagta gtgttgctaa gggacagggc aataatccgg tatggaatga gaaatttgtg 240
 ttcaaggtag aatatcctac actgagtaat tcatacaaga ttatcttaaa natcatggac 300
 aaggatcttt tatctgcaga tgactttggt ggtaagcca tagtcctang tgggaagatt 360
 tattagccat aaggggtaga ggatgggtgcc ggctgagcta caacctccta aagtacnaga 420
 gtaattccgt gcagatnaat ccttantggg ggagaaattg atcttgggat aacttttaaa 480
 gggggnaaga angagttcaa tggagnaagc ctaaaccaag gatcnaang acagtaaatt 540
 agtntttc 548

<210> 46
 <211> 89
 <212> PRT
 <213> Glycine max

<220>
 <221> UNSURE
 <222> (71)

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<400> 46
 Gly Phe Met Glu Val Gln Leu Val Lys Ala Lys Glu Leu Cys Asp Thr
 1 5 10 15
 Asp Phe Phe Gly Ser Met Asp Pro Tyr Val Val Ile Gln Tyr Asn Gly
 20 25 30
 Gln Glu Gln Arg Ser Ser Val Ala Lys Gly Gln Gly Asn Asn Pro Val
 35 40 45
 Trp Asn Glu Lys Phe Val Phe Lys Val Glu Tyr Pro Thr Leu Ser Asn
 50 55 60
 Ser Tyr Lys Ile Ile Leu Xaa Ile Met Asp Lys Asp Leu Leu Ser Ala
 65 70 75 80
 Asp Asp Phe Val Gly Gln Ala Ile Val
 85

<210> 47
 <211> 473
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (296)

<220>
 <221> unsure
 <222> (473)

<400> 47
 tccaaacgcy acctcatcag agcaagaccc ggaggaaaca aggagaggcc agagcggcct 60
 gtcacaaggc aaggacagag gaggtgcttg ttcagggtctc ctgctagatc cggaggcgat 120
 gggcaggggc tgctggaggt gcatctcgtc gacgccaaag gcctcttcgg cagcgatttc 180
 ctaggaagat cgacccgtat gtaatcgtgc aataccggag ccaggagcgc aagagcagca 240
 ctccagagat gaggggagga acccgagctg gaacgaggtg ttccggttcc agatcnctcc 300
 tctgcggcca acgggcagca caagctcttc ctccggatca tggaccacga catcttctcc 360
 agcgacgact tcctcggcca agcgacgac aacgtgaccg atctgatcag accggcatgg 420
 agaagcgggc gcgtcgcagc tgaacgcggc aaagtacaac gttgttgtcc gcn 473

<210> 48
 <211> 99
 <212> PRT
 <213> Triticum aestivum

<220>
 <221> UNSURE
 <222> (24)

<220>
 <221> UNSURE
 <222> (47)

<220>
 <221> UNSURE
 <222> (62)

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<400> 48

Gly Gln Gly Leu Leu Glu Val His Leu Val Asp Ala Lys Gly Leu Phe
 1 5 10 15

Gly Ser Asp Phe Leu Gly Arg Xaa Asp Pro Tyr Val Ile Val Gln Tyr
 20 25 30

Arg Ser Gln Glu Arg Lys Ser Ser Thr Pro Glu Met Arg Gly Xaa Gly
 35 40 45

Glu Glu Pro Glu Leu Glu Arg Gly Val Pro Val Pro Asp Xaa Ser Ser
 50 55 60

Ala Ala Asn Gly Gln His Lys Leu Phe Leu Arg Ile Met Asp His Asp
 65 70 75 80

Ile Phe Ser Ser Asp Asp Phe Leu Gly Gln Ala Thr Ile Asn Val Thr
 85 90 95

Asp Leu Ile

<210> 49

<211> 465

<212> DNA

<213> Oryza sativa

<400> 49

aaagatcacc caaaacccta tattccatag ttgagacaca agattttttg aagccaagtt 60
 tgcgcattac atcaaaggtt tcttttgatg cgaccaatgc tgtgaagagt gtaactagca 120
 gtatctctag cgcttcaggg aagcatgtcg ctgacgatac aagagaattt gttggagagc 180
 tgaacattac agtggttaaga ggtattcaag ttggccgtca gagacatgct aacgagcgat 240
 ccatatgttg ttctaactact tggggagcag aaagctcaaa ccactgttaa accgagtgc 300
 ttgaaccag tatggaatga ggtgcttaag atatcaattc ctcgaaatta tggacctctt 360
 aaacttgaag tatacgacca tgatacgttc tctgctgatg atatcatggg ggaagcggag 420
 atagatcttc aaccaatgat cacagccgtc atggcctttg gagaa 465

<210> 50

<211> 31

<212> PRT

<213> Oryza sativa

<400> 50

Val Val Leu Thr Leu Gly Glu Gln Lys Ala Gln Thr Thr Val Lys Pro
 1 5 10 15

Ser Asp Leu Asn Pro Val Trp Asn Glu Val Leu Lys Ile Ser Ile
 20 25 30

<210> 51

<211> 390

<212> DNA

<213> Oryza sativa

<220>

<221> unsure

<222> (43)

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PCT/US00/09110

<220>
 <221> unsure
 <222> (204)

<220>
 <221> unsure
 <222> (301)

<220>
 <221> unsure
 <222> (347)

<220>
 <221> unsure
 <222> (373)

<400> 51
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 gcgagagatc gatcgaagag aagaggagag atgggtgcacg ggaagctgga ggtcctcctc 120
 gtctgcgccca agggcctcga ggacactgac ttcttgaacg acatggaccc ctacgtgac 180
 ctcacctgcc gcactcagga gcangaaaag cagcgttgca aaaggagcag gaagcgagcc 240
 tgaatggaac gagaccttcg tcttcaccgt ctccgacgat gttccacagc tcaatgtcaa 300
 ngatcatgga caagtgatgg ccttctcaag ctgacgattt cggtcnnggt gaagcaaaca 360
 attcctctgg gangcctgtg ttcctgggaa 390

<210> 52
 <211> 69
 <212> PRT
 <213> Oryza sativa

<400> 52
 Met Val His Gly Lys Leu Glu Val Leu Leu Val Cys Ala Lys Gly Leu
 1 5 10 15
 Glu Asp Thr Asp Phe Leu Asn Asp Met Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Cys Arg Thr Gln Glu Gln Lys Ser Ser Val Ala Lys Gly Ala Gly Ser
 35 40 45
 Glu Pro Glu Trp Asn Glu Thr Phe Val Phe Thr Val Ser Asp Asp Val
 50 55 60
 Pro Gln Leu Asn Val
 65

<210> 53
 <211> 489
 <212> DNA
 <213> Glycine max

<220>
 <221> unsure
 <222> (417)

<220>
 <221> unsure
 <222> (428)

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PCT/US00/09110

<220>
 <221> unsure
 <222> (452)

<220>
 <221> unsure
 <222> (482)

<400> 53
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 catttctggc acaatttttt ccacctttat ttcaacttta agactccaca gaaagaagca 120
 tattcctgag tcaaatagtt ctgtccatat agaatttgtg aagtgagagt ccaacctttc 180
 attttcaatt ttcaaagatg cctcgtggaa cacttgaagt tgttctgac agcgccaaag 240
 gaatcgatga caatgatttt ctctccagca tagatcctta tgtgattctc acatacaggg 300
 cacaggagaa aaagagcact gtgcaagaaa gatgctggat ccaagccaca atggaatgag 360
 agctttcttt tcaactgtctc tgacagtgtc tctgaactta atctgaagat aatgggntaa 420
 agacaacntt agtcaaagat gggtggcctg gngaggggaa caatcaatta gattcaagtg 480
 gnttggagg 489

<210> 54
 <211> 42
 <212> PRT
 <213> Glycine max

<400> 54
 Met Pro Arg Gly Thr Leu Glu Val Val Leu Ile Ser Ala Lys Gly Ile
 1 5 10 15
 Asp Asp Asn Asp Phe Leu Ser Ser Ile Asp Pro Tyr Val Ile Leu Thr
 20 25 30
 Tyr Arg Ala Gln Glu Lys Lys Ser Thr Val
 35 40

<210> 55
 <211> 523
 <212> DNA
 <213> Triticum aestivum

<220>
 <221> unsure
 <222> (401)

<220>
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<220>
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 <222> (456)..(457)

<220>
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 <222> (493)